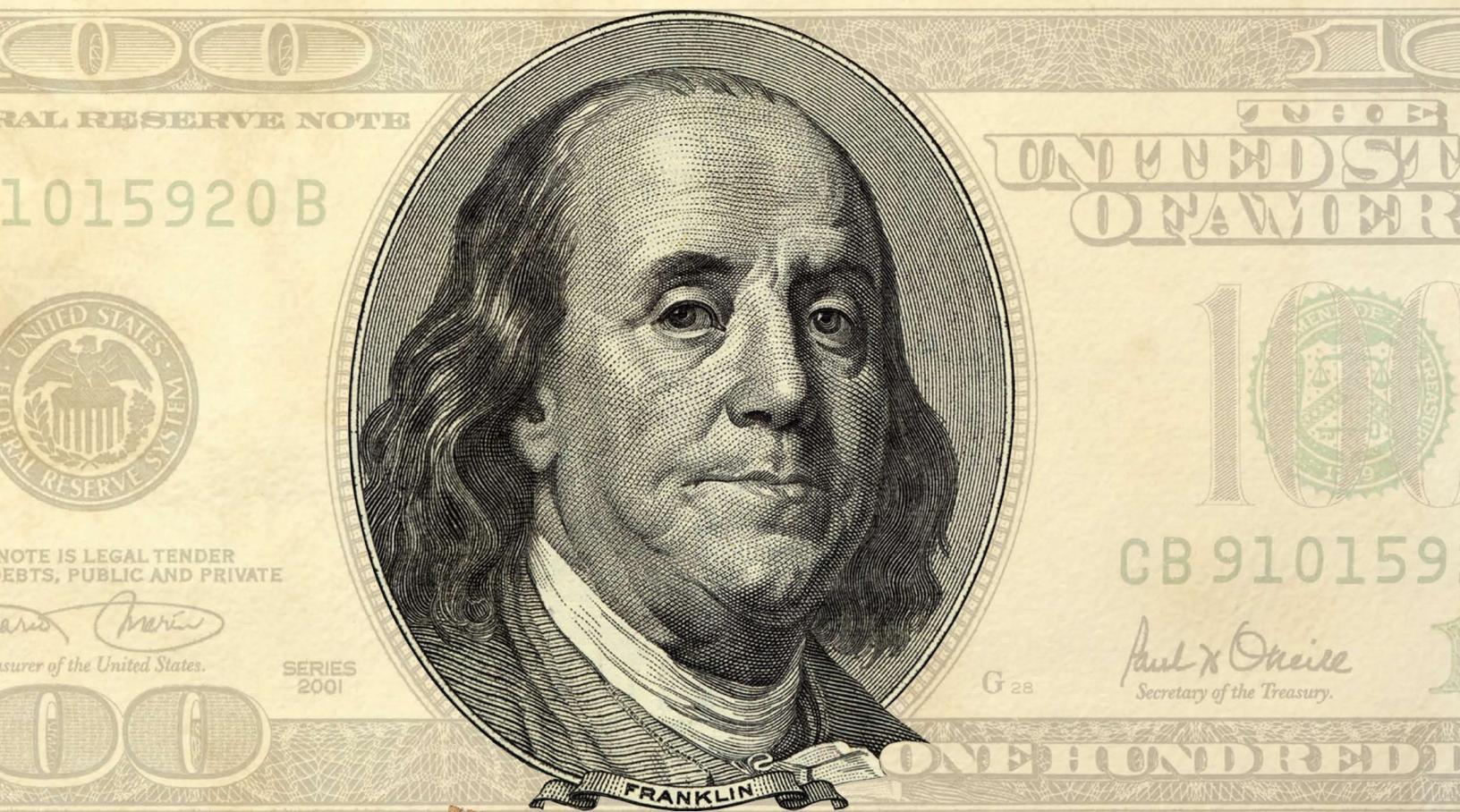


Benjamin Franklin

And the Birth of a Paper Money Economy



About the Essay

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This essay is based on a lecture given by Professor Farley Grubb on March 30, 2006, at the Federal Reserve Bank of Philadelphia. The Reserve Bank and The Library Company of Philadelphia co-sponsored this lecture as one of many events held in the city of Philadelphia to mark the 300th birthday of Benjamin Franklin.

About the Author

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Farley Grubb holds a Ph.D. in economics from the University of Chicago. He has received numerous professional honors, including an Outstanding Teaching Award from the College of Business and Economics at the University of Delaware and a Pew Teaching Fellowship. In addition to his other research interests, Grubb has initiated several studies related to Ben Franklin. Among them are a re-examination of how legal tender laws operated in the colonies and a look at Franklin's analysis of the colonial paper money system and the origins of his monetary philosophy.



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Benjamin Franklin

And the Birth of a Paper Money Economy

By Farley Grubb

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Paper money has often been controversial and misunderstood. Why it has value, why that value changes over time, how it influences economic activity, who should be allowed to make it, how its use and creation should be controlled, and whether it should exist at all are questions that have perplexed the public, vexed politicians, and puzzled economic experts. Knowing how, when, and why paper money first became commonplace in America and the nature of the institutions issuing it can help us better comprehend paper money's role in society. Benjamin Franklin dealt often with this topic, and his writings can teach us much about it.

There are two distinct epochs of paper money in America. The first began in 1690 and ended with the adoption of the U.S. Constitution in 1789. In this first epoch the legislatures of the various colonies (later states) directly issued their own paper money — called bills of credit — to pay for their own governments' expenses and as mortgage loans to their citizens, who pledged their lands as collateral. This paper money became useful as a circulating **medium of exchange*** for facilitating private trade within the colony/state issuing it. By legal statute and precedent, people could always use their paper money to pay the taxes and mortgage payments owed to the government that had issued that specific paper money, which, in turn, gave that money a local "currency." There could be as many different paper monies as there were separate colonies and states.

At the 1787 Constitutional Convention, the Founding Fathers took the power to directly issue paper money away from both state and national legislatures. This set the stage for the second epoch of paper money in America, namely, the ascendance of a government-chartered and -regulated, but privately run, bank-based system of issuing paper money, an epoch we are still in today.

Between the late 18th and early 20th centuries, banks backed their issuances of paper money — bank notes — with reserves of gold and silver coins. Under normal conditions, bank notes were convertible at face value on demand into that money. Today, these gold and silver backing and convertibility conditions have been replaced with other assets and regulations.

Benjamin Franklin's life spans most of the first epoch of paper money, and he is its most insightful analyst and ardent defender. He did not create the first paper money in America, nor was he yet born when it was first used. However, these early experiments with paper money, beginning in 1690 in New England and in the first two decades of the 18th century in the Carolinas, New York, and New Jersey, were limited emergency wartime exercises, temporary in design. Beginning in the 1720s colonial legislatures began to move toward issuing paper money with a view to making it a permanent fixture within their colonies. Pennsylvania was an important leader and the most successful colony in this movement. It is the birth of this permanent peacetime paper money supply that Franklin will affect.

No other American was involved over as long a period of time with so many different facets of colonial paper money as was Benjamin Franklin — certainly no other American with such a preeminent stature in science, statesmanship, and letters. Franklin arrived in Philadelphia the year paper money was first issued by Pennsylvania (1723), and he soon became a keen observer of and commentator on colonial money. He wrote pamphlets, treatises, and letters about paper money. He designed and printed paper money for various colonies. He entertained ideas about and proposed alternative monetary systems. As an assemblyman for the colony of Pennsylvania, he was involved in the debates during the 1740s and 1750s over the man-

* Boldface and related terms can be found in the Glossary on page 8.

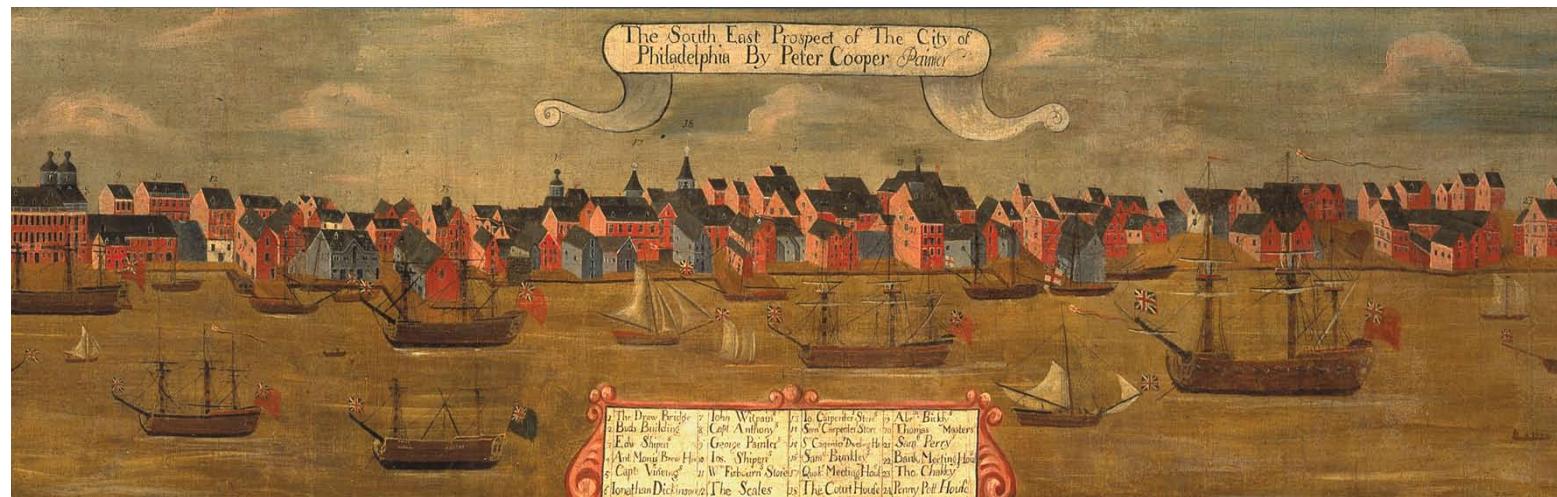
agement of that colony's paper money. As a lobbyist for various colonies to the British court, he dealt with conflicts over colonial paper money that arose between Britain and her colonies in the 1760s and 1770s. Finally, at the end of his life as one of the preeminent Founding Fathers at the 1787 Constitutional Convention, he participated in constitutionally ending the first epoch and so helped usher in the second epoch of paper money in America. Franklin is arguably the preeminent authority on paper money in America in this period.

Franklin's Early Career

Franklin arrives in Philadelphia in 1723. He is 17 years old. Philadelphia's population is about 6,000 and Pennsylvania's population is about 35,000. The province is also in the doldrums. Franklin recalls seeing many vacant houses for rent, sluggish economic activity, and a decline in permanent inhabitants. He notes that just prior to 1723 foreign

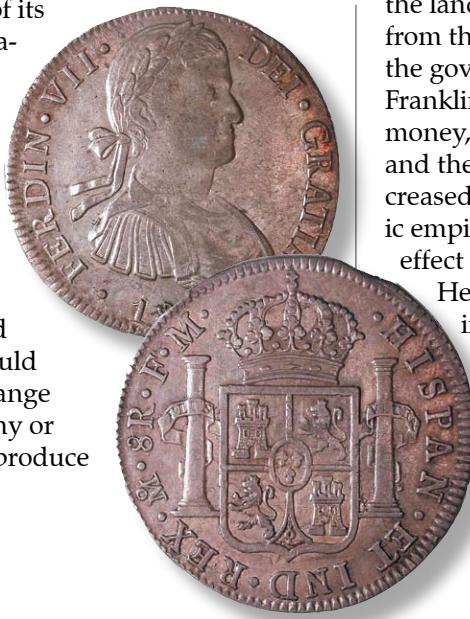
gold or silver and could only procure these coins through trade. Pennsylvanians would typically export goods to Spanish and Portuguese America in exchange for gold and silver coins. These coins could either be kept in the colony to serve as a medium of exchange for internal trade or exported to Europe to pay for manufactured goods. If the coins were exported, the colony might not have enough of this money with which to facilitate internal trade within the colony. Franklin often points this out in his writings, saying that unless some measures are taken to prevent the export of gold and silver coins, foreign trade could lead to temporary shortages of gold and silver, thus inhibiting internal trade within the colony.

The Pennsylvania legislature issued its first paper money in 1723 — a modest amount of £15,000 (the equivalent of just over 48,000 Spanish silver dollars), with another £30,000 issued in 1724. This paper money was not linked to or backed by gold and silver money. It was backed by



Philadelphia, ca. 1718. *The Library Company of Philadelphia*

trade had stripped the colony of its gold and silver coins: Pennsylvanians had exchanged much of their gold and silver coins for manufactured goods brought in from Europe. Without this money, local trade within the colony is difficult to transact. In this era, the monetary medium of exchange between colonies and countries was gold and silver coins. These coins could also serve as a medium of exchange for internal trade within a colony or country. Pennsylvania did not produce



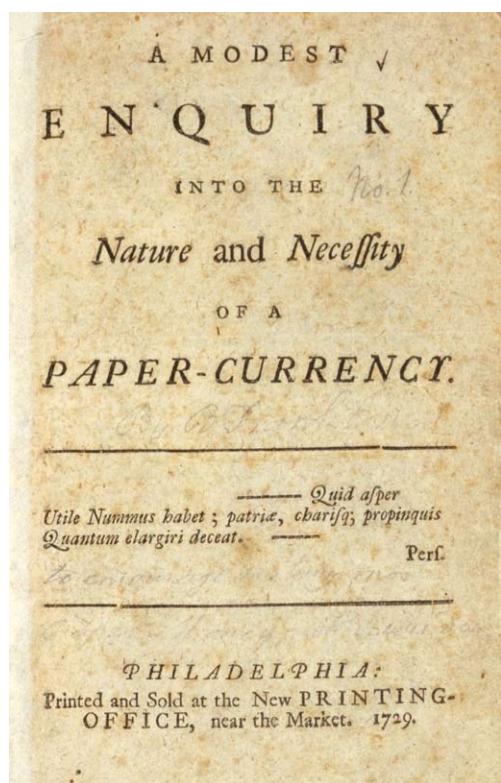
the land assets of subjects who borrowed paper money from the government and by the future taxes owed to the government that could be paid in this paper money. Franklin notes that after the legislature issued this paper money, internal trade, employment, new construction, and the number of inhabitants in the province all increased. This feet-on-the-ground observation, this scientific empiricism in Franklin's nature, would have a profound effect on Franklin's views on money throughout his life.

He will repeat this youthful observation many times in his future writings on money.

Spanish milled dollars or Pillar dollars: These silver coins were often minted in Mexico and other Latin American countries but were commonly used in the American colonies.

After a brief trip to London, Franklin returns to Philadelphia in 1726, where he puts down deep roots into the community, starts the Junto discussion group in 1727 (which eventually became the American Philosophical Society), buys the Pennsylvania Gazette newspaper in 1729, and over time, along with Philadelphia itself, grows prosperous. By the time he leaves for London in 1757 as an agent for the province at age 51, he has become a successful, even famous, printer, scientist, and Pennsylvania assemblyman. Philadelphia has grown to around 14,000 and Pennsylvania to around 180,000 inhabitants.

But in 1729 this future prosperity of Pennsylvania was anything but assured. The initial paper money issued in 1723 was due to expire in 1731. (Typically, paper money was issued with a time limit within which it could be used to pay taxes owed to the issuing government — the money paid in being removed from circulation.) There was considerable resistance from the wealthy and the political elite to a continuation of the paper money experiment for fear that the paper money might depreciate as it had in New England and South Carolina. They wanted a return to gold and silver coins as the only money of the province.



Title page of "A Modest Enquiry into the Nature and Necessity of a Paper Currency," April 3, 1729. *The Library Company of Philadelphia*

In 1729, Franklin discusses this issue in the Junto, taking the side of favoring a continuation of the paper money economy. The outcome of this discussion prompts him to write an anonymous pamphlet, one of the first to be published by his press: "A Modest Enquiry into the Nature and Necessity of a Paper Currency." Franklin is only 23 years old.

This pamphlet, a brilliant tour de force, is well received by the common people. The rich, however, hate it, but they have no writers among them able to answer it. Franklin's arguments carry the day, and the paper money bill gains a majority in the assembly. In 1729, £30,000 in paper money is issued and another £40,000 in 1731, the latter being the first to be printed for Pennsylvania by Franklin, for which he receives £100 in payment.

Franklin begins his pamphlet by noting that a lack of money to transact trade within the province carries a heavy cost because the alternative to paper money is not gold and silver coins, which through trade have all been shipped off to England, but **barter**. Barter, in turn, increases the cost of local exchange and so lowers wages, employment, and immigration. Money scarcity also causes high local interest rates, which reduces investment and slows development. Paper money will solve these problems.

But what gives paper money its value? Here Franklin is clear throughout his career: It is not **legal tender laws** or **fixed exchange rates** between paper money and gold and silver coins but the quantity of paper money relative to the volume of internal trade within the colony that governs the value of paper money. An excess of paper money relative to the volume of internal trade causes it to lose value (depreciate). The early paper monies of New England and South Carolina had depreciated because the quantities were not properly controlled. So will the quantity of paper money in Pennsylvania be properly controlled relative to the demands of internal trade within the province?

First, Franklin points out that gold and silver are of no permanent value and so paper monies linked to or backed by gold and silver, as with bank paper money in Europe, are of no permanent value. Everyone knew that over the previous 100 years the **labor value of gold and silver** had fallen because new discoveries had expanded supplies faster than demand. The **spot value** of gold and silver could fluctuate just like that of any other commodity and could be acutely affected by unexpected trade disruptions. Franklin observes in 1729 that "we [Pennsylvanians] have already parted with our silver and gold" in trade with England, and the difference between the value of paper money and that of silver is due to "the scarcity of the latter."

Second, Franklin notes that land is a more certain and steady asset with which to back paper money. For a given colony, its supply will not fluctuate with trade as much as gold and silver do, nor will its supply be subject to

long-run expansion as New World gold and silver had been. Finally, and most important, land cannot be exported from the province as gold and silver can. He then points out that

Pennsylvania's paper money will be backed by land; that is, it will be issued by the legislature through a loan office, and subjects will pledge their lands as collateral for loans of paper money.

Finally, Franklin argues that "coined land" or a properly run land bank will automatically stabilize the quantity of paper money issued — never too much and never too little to carry on the province's internal trade. If there is too little paper money, the barter cost of trade will be high, and people will borrow more money on their landed security to reap the gains of the lowered costs that result when money is used to make transactions. A properly run land bank will never loan more paper money than the landed security available to back it, and so the value of paper money, through this limit on its quantity, will never fall below that of land. If, by chance, too much paper money were issued relative to what was necessary to carry on internal trade such that the paper money started to lose its value, people would snap up this depreciated paper money to pay off their mortgaged lands in order to clear away the mortgage lender's legal claims to the land. So people could potentially sell the land to capture its real value. This process of paying paper money back into the government would reduce the quantity of paper money in circulation and so return paper money's value to its former level.

Automatic stabilization or a natural **equilibrium** of the amount of paper money within the province results from decentralized market competition within this monetary institutional setting. Fluctuations in the demand for money for internal trade

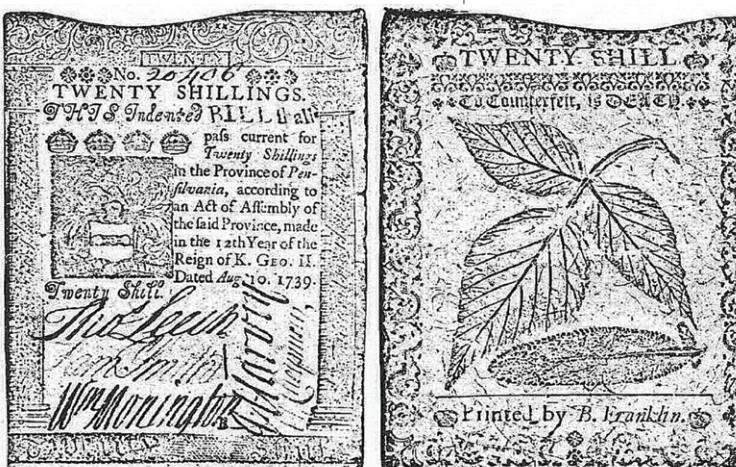


Paper money printed by B. Franklin and his partner D. Hall. Left to right: 5 pound Pennsylvania note, 1759; 15 shilling Pennsylvania note, 1757; 20 shilling Delaware note, 1758. From the Historical and Interpretive Collections of the Franklin Institute, Inc., Philadelphia, PA

are accommodated by a flexible internal money supply directly tuned to that demand. This in turn controls and stabilizes the value of money and the **price level** within the province.

Colonial legislatures did not always follow this land-bank institutional design. They often issued large amounts of paper money directly to pay for emergency military expenditures, promising to redeem the paper money through future taxes. Imbalances between money issued in this way and then withdrawn from circulation through future taxes could potentially push the economy away from Franklin's automatically stabilizing monetary equilibrium.

Early Mid-Career: Franklin as Printer of Paper Money and Pennsylvania Assemblyman



20 shilling Pennsylvania note, 1739. Reprinted with permission from Eric Newman, Numismatic Education Society

Franklin, as an employee of Samuel Keimer, helps to design and print the paper money authorized by the New Jersey legislature in 1728. On his own with his own press (at age 25), Franklin first secures the contract to print the paper money authorized by the Pennsylvania legislature in 1731. He prints Pennsylvania's paper money from 1731 through 1746

and, with partner David Hall, from 1749 through 1764. With his return to London in 1764 he sells his remaining interest to Hall. Between 1731 and 1764 Franklin is authorized to print just over £770,000 of Pennsylvania paper money, the equivalent of just over 2 million Spanish silver dollars. Between 1734 and 1760 he also prints Delaware paper money, a total of £86,000, and in 1737 one issue of £50,000 of New Jersey paper money.

In 1737 Franklin invents the art of nature printing from leaf casts, via a copper plate press, for transferring a sage leaf image onto the back of paper money bills, a technique intended to thwart counterfeiters. This technique was first used on the 1737 New Jersey note. The 1739 Pennsylvania note displayed on page 4 is the earliest surviving example of this technique that could be located.

In the early 1750s, as an assemblyman in the Pennsylvania legislature, Franklin becomes engaged in the debates with the province's **proprietor**, the proprietor's governors, and the British Board of Trade over the continuation of Pennsylvania's paper money economy, which the proprietor and the Board of Trade want to restrict if not curtail altogether. Franklin reiterates his arguments first offered in 1729. For example, in 1752 Franklin states that paper money furnishes "the country [Pennsylvania] with a medium of trade, and of a kind that could not, to any purpose, be exported" and that without paper money "the province will then be left without any currency, except that precarious one of silver, which cannot be depended on, being continually wanted to ship home [to England], as returns, to pay for the manufactures of Great Britain."

Late Mid-Career: Franklin as Diplomat for the Colonies

In 1764 Franklin returns to London and, from 1764 to 1775, serves as an agent for Pennsylvania (and later for several other colonies as well). He is now a renowned scientist and writer. The debates over colonial paper money, however, continue to engage him. In 1765, in response to Lord Grenville's challenge to come up with some palatable way for the British to increase taxes on the colonists to help pay for the Seven Years War, Franklin writes up a proposal for a North-America-wide universal paper currency modeled on Pennsylvania's land bank system. The British would run the colonial land bank and collect the interest on the paper money loaned out to colonists in place of any new direct taxes placed on the colonists. The colonies would

get a universal paper currency to support internal trade throughout colonial America. Franklin's proposal appears to be the first ever made for a universal or "national" American paper currency. The colonists' unexpectedly violent response to the Stamp Act and the Pennsylvania Assembly's instructions to Franklin to not let the British infringe on their money-issuing privileges led Franklin to abandon his proposal and obscure his authorship.

The Pennsylvania Assembly also instructed Franklin to lobby for repeal of the new British restriction on colonial paper money enacted in 1764. In making his case Franklin adds an important new argument to his arsenal. He points out that while a bank-based paper money system with the paper money payable on demand in gold and silver may be preferable, such a bank-based system is "impracticable" in the colonies as long as the colonies are held as a dependent country and not allowed to implement their own foreign trade and capital controls. Britain and other European countries can use gold and silver as their money for internal trade and so can develop a bank-based paper money system because they can execute laws that guard against the foreign trade that would cause an untimely export of their gold and silver. Franklin writes that gold and silver have a "universal estimation" but "that very universal estimation is an inconvenience which paper money is free from, since it [gold and silver money] tends to deprive a country of even the quantity of currency that should be retain'd as a necessary instrument of its internal commerce; and obliges it to be continually on its guard in making and executing...the laws that are to prevent the trade which exports it." Britain does not allow the colonies to exercise such legal powers, and so the colonies cannot rely on retaining enough imported gold and silver to support their internal trade. The colonies, therefore, need a **fiat paper money** that is not linked to gold and silver money.

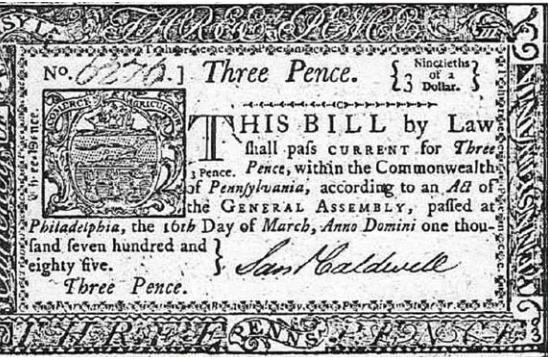
The Twilight of a Long Career: Franklin as Senior Revolutionary and Founding Father

From 1776 to 1785 Franklin serves as the U.S. representative to the French court. He has the occasion to write on one important monetary topic in this period, namely, the massive depreciation of Congress' paper money — the **Continental dollar** — during the revolution. In a letter to Joseph Quincy in 1783, Franklin claims that he predicted this outcome and had proposed a better paper money plan, but that Congress had rejected it.

The Continental dollar was not backed by land assets through a land-bank scheme. It was backed by future taxes to be collected by the states rather than by Congress, which could not yet enact its own taxes. In the end, these taxes were seldom collected.

In addition, around 1781 Franklin writes a tract called "Of the Paper Money of America." In it he argues that the depreciation of the Continental dollar operated as an **inflation tax** or a tax on money itself. As such, this tax fell more equally across the citizenry than most other taxes. In effect, every man paid his share of the tax according to how long he retained a Continental dollar between the time he received it in payment and when he spent it again, the intervening depreciation of the money (inflation in prices) being the tax paid.

In 1785 Franklin returns to America and is elected (in effect) governor of Pennsylvania. He is 79 years old. Just before his arrival, the Pennsylvania legislature issued £150,000 of new paper money. Pennsylvania's population in 1785 was about 330,000 inhabitants. Franklin's position on Pennsylvania's new 1785 paper money is somewhat ambiguous. In letters written in April 1787 he says, "It was made before my arrival, and not being a legal tender can do no injustice to anybody, nor does any one here complain of it, though many are justly averse to an increase of the quantity at this time." But he also writes, "Paper money in moderate quantities has been found beneficial; when more than the occasions of commerce require, it depreciated and was mischievous; and the populace are apt to demand more than is necessary."



Pennsylvania State Paper Money — the last to be issued: 3 Pence Note, 1785. *Reprinted with permission from Eric Newman, Numismatic Education Society*



Bank of North America Small Change Notes, A Three-Penny and One-Penny Note, 1789. *Reprinted with permission from Eric Newman, Numismatic Education Society*

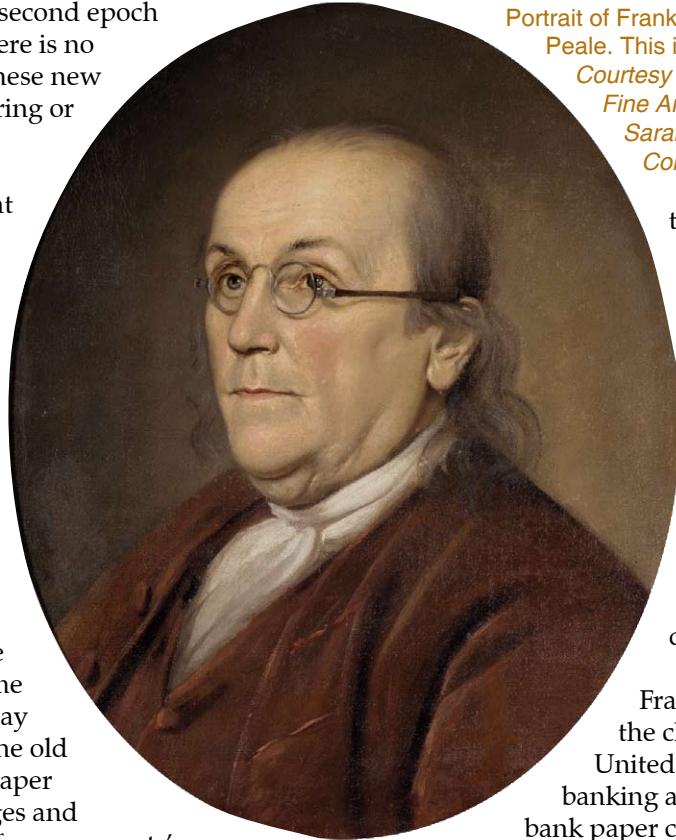
In letters written in April and May of 1787 Franklin also writes favorably about the new bank-based paper money that arose after the revolution. He says that there is "one bank in good credit. I myself purchased ten actions [shares of stock] in it, which, at least, shows my good opinion of it." He also writes that the bank's "management is so prudent, that I have no doubt of it continuing to go on well. ... Their notes are always instantly paid on demand [in gold and silver], and pass on all occasions as readily as silver." This bank was the Bank of North America, started in 1782 and the precursor to the first Bank of the United States. The Bank of North America bank notes shown above were printed by Benjamin Franklin's grandson Benjamin Franklin Bache on special marbled paper that Franklin had acquired in 1779 while in France and had brought back with him to America in 1785. The special marbled paper served as a deterrent to counterfeiters.

We do not know how Franklin voted at the 1787 Constitutional Convention on the key monetary proposals to prohibit state and national legislatures from issuing paper money because individual votes were not recorded and Franklin does not tell us how he voted. The Pennsylvania delegation, of which Franklin was the senior member, as a whole voted for these new restrictions, thus ending the

first epoch and ushering in the second epoch of paper money in America. There is no record of Franklin's opposing these new monetary restrictions either during or after the convention.

Although he had been an ardent supporter of colonial government paper money, Franklin was not opposed to a private bank-based system of paper money backed by reserves of gold and silver coins as long as the nation had sovereign power to control trade and capital flows to protect its gold and silver money supply from the trade disruptions that might cause it to be precipitously exported. With the sovereign power to regulate money and trade flows that came with independence, Franklin may have been willing to abandon the old system of legislatures' issuing paper money backed by land mortgages and future taxes for a new system of governments' chartering and regulating privately run banks that issued paper money backed by reserves of gold and silver. Certainly Franklin's enthusiasm for the Bank of North America points in that direction.

In 1788, at age 82, two years before his death, Franklin makes his last recorded statement on paper money in a letter to a French correspondent. In reference to popular legislative attempts during and shortly after the revolution to use legal tender laws to fix the value of otherwise depreciating paper monies, he says, "Where there is a free government, and the people make their own laws by their representatives, I see no injustice in their obliging one another to take their own paper money. It is no more so



Portrait of Franklin, age 79, by Charles Willson Peale. This is the last live portrait of Franklin. *Courtesy of the Pennsylvania Academy of the Fine Arts, Philadelphia. Bequest of Mrs. Sarah Harrison (The Joseph Harrison, Jr. Collection)*

than compelling a man by law to take his own note. But it is unjust to pay strangers with such money against their will. The making of paper money with such a sanction is however a folly, since, although you may by law oblige a citizen to take it for his goods, you cannot fix his prices; and his liberty of rating them as he pleases, which is the same thing as setting what value he pleases on your money, defeats your sanction."

Franklin dies in 1790, shortly before the chartering of the Bank of the United States, the first effort at central banking and the creation of a national bank paper currency under the new U.S. Constitution.

Further Reading

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For Franklin's writings on monetary matters, see

Labaree, L. W., W. B. Willcox, and B. B. Oberg (eds.), *The Papers of Benjamin Franklin*, Vols. 1-34. New Haven: Yale University Press, 1959-1998.

Smyth, A. H. *The Writings of Benjamin Franklin*, Vols. 1-10. New York: Macmillan, 1907.

Glossary of Terms

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Barter: The direct exchange of goods and services among people. No money is used in the exchange.

Continental dollar: Paper currency issued by the Continental Congress to finance the Revolutionary War. The currency was not redeemable on demand for gold or silver. Congress issued so much of this currency during the war that inflation became rampant and destroyed its value, which led people to use the phrase: "Not worth a Continental."

Equilibrium: A situation in which the quantities demanded and supplied in a market are equal. Equilibrium exists when forces that cause changes in the market are in balance so that there is no tendency for the market price to change.

Monetary equilibrium: When the quantity of money supplied is equal to the quantity demanded.

Exchange rate: The value of one currency expressed in terms of another currency.

Fixed exchange rate: A fixed exchange rate is when the value of a currency is fixed by governmental action at some officially determined level in terms of another currency.

Fiat paper money (or Fiat currency): Paper currency that has value because the government has decreed that it is a "legal tender" for making tax payments and often for discharging other debts and payments as well. Fiat money does not represent a claim on some other form of money or commodity such as gold and silver.

Functions of money:

Medium of exchange: Acts as a go-between to make it easier to buy and sell goods or services or pay debts. Allows buyers and sellers to avoid the difficulties associated with barter exchanges of goods and services.

Store of value: Allows people to transfer the purchasing power of their present money income or wealth into the future, ideally without a loss of value. Stores purchasing power between the time money is earned and the time it is spent.

Unit of account: Serves as a way to measure and compare the value of goods and services in relation to one another. When comparing prices, individuals can determine if one good is a better buy than another. It also allows people to keep accurate financial records.

Inflation tax: The transfer of resources to the government from businesses and consumers that occurs when government spending is financed by printing government-issued money rather than being financed by government taxes or borrowing from the public. When the government obtains goods and services by printing new money and inflation occurs, consumers and businesses holding money pay an inflation tax because inflation erodes the purchasing power of their money holdings.

Labor value of money: A theory that holds that the value of a good is determined by the value of the labor that went into making it.

Legal tender laws: Government laws that decree that creditors are required to accept an asset (such as paper money or coins) in settlement of debts and that the government will accept the asset in payment of taxes. When paper money and coins are a legal tender and people use them to settle a debt, the obligation is considered to be paid in full.

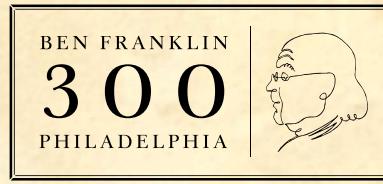
Price level: The average level of the prices of products and services purchased by consumers.

Proprietor (of Pennsylvania): Pennsylvania was chartered as a proprietary colony under a royal grant to William Penn, making him (and his heirs) the proprietor of the province. William Penn's son, Thomas Penn, was the province's proprietor in the 1750s but had left Pennsylvania and was living in England.

Spot value (or spot price): The value or price at which current transactions of goods and services take place. The spot market is the market in which goods and services are traded for immediate delivery and payment. Purchased or sold "on the spot" as opposed to some later time.



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